

**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	1875.4600001
First Inventor	VERBIST
Title	Transceiver For Bidirectional Division Multiplexed Transmission
Express Mail Label No.	

2228 U.S. PTO
107094950**APPLICATION ELEMENTS**
See MPEP chapter 600 concerning utility patent application contents.**ADDRESS TO:**Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original, and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 16]
(preferred arrangement set forth below)
- Descriptive title of the Invention
- Cross Reference to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to sequence listing, a table,
or a computer program listing appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 2]
5. Oath or Declaration [Total Pages 1]
a. ☒ Newly executed (original or copy)
b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 18 completed)
i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR
1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76.

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program
(Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☒ Other: Authorization under 37 C.F.R. § 1.136(a)(3)
☒ Other: The name of the assignee is: **Broadcom Corporation**

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-Part (CIP) of prior application No: /
Prior application information: Examiner Art Unit:

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.**19. CORRESPONDENCE ADDRESS**☒ Customer Number **26111**or ☐ Correspondence address below

NAME	STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.				
	Attorneys at Law				
ADDRESS					
CITY		STATE		ZIP CODE	
COUNTRY		TELEPHONE		FAX	

NAME (Print/Type)	Robert J. Verbist	Registration No. (Attorney/Agent)	36,013
SIGNATURE		Date	10/28/03

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

102903

102903 U.S. PTO

**FEE TRANSMITTAL
for FY 2004**

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT (\$810.00)****Complete if Known**

Application Number	To Be Assigned
Filing Date	H rewith
First Named Inventor	Rudi VERBIST
Examiner Name	To Be Assigned
Art Unit	To Be Assigned
Attorney Docket No.	1875.4600001

METHOD OF PAYMENT (check all that apply)☐ Check ☒ Credit card ☐ Money Order ☒ Other** ☐ None

** Charge any deficiencies or credit any overpayments in the fees or fee calculations of Parts 1, 2 and 3 below to Deposit Account No. 19-0036.

☐ Deposit Account
Deposit Account Number 19-0036

Deposit Account Name: Sterne, Kessler, Goldstein & Fox P.L.L.C.

The Commissioner is authorized to: (check all that apply)☐ Charge fee(s) indicated below ☐ Credit any over payments☐ Charge any additional fee(s) during the pendency of this application☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	\$770.00
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1105	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					(\$ 770.00)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra	Fee from below	Fee Paid
Total Claims 11 - 20** =	X		
Indep. Claims 2 - 3** =	X		
Multiple Dependent			

Large Entity Fee Code	Small Entity Fee Code	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	**Reissue independent claims over original patent
1205 18	2205 9	**Reissue claims in excess of 20 and over original patent
SUBTOTAL (2) (\$)		

**or number previously paid, if greater; For Reissue, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath			
1502 50	2052 25	Surcharge-late provisional filing fee or cover sheet			
1053 130	1053 130	Non-English specification			
1812 2,520	1812 2,520	For filing a request for ex parte reexamination			
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action			
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action			
1251 110	2251 55	Extension for reply within first month			
1252 420	2252 210	Extension for reply within second month			
1253 950	2253 475	Extension for reply within third month			
1254 1,480	2254 740	Extension for reply within fourth month			
1255 2,010	2255 1,005	Extension for reply within fifth month			
1401 330	2401 165	Notice of Appeal			
1402 330	2402 165	Filing a brief in support of an appeal			
1403 290	2403 145	Request for oral hearing			
1451 1,510	1451 1,510	Petition to institute a public use proceeding			
1452 110	2452 55	Petition to revive - unavoidable			
1453 1,330	2453 665	Petition to revive - unintentional			
1501 1,330	2501 665	Utility issue fee (or reissue)			
1502 480	2502 240	Design issue fee			
1503 640	2503 320	Plant issue fee			
1460 130	1460 130	Petitions to the Commissioner			
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)			
1806 180	1806 180	Submission of Information Disclosure Stmt			
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	\$40.00		
1809 770	2809 385	Filing a submission after final rejection (37 CFR 1.129(a))			
1810 770	2810 385	For each additional invention to be examined (37 CFR 1.129(b))			
1801 770	2801 385	Request for Continued Examination (RCE)			
1802 900	1802 900	Request for expedited examination of a design application			

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$40.00)**SUBMITTED BY**

Complete (if applicable)

Name (Print/Type)	Robert Solich	Registration No. (Attorney/Agent)	36,013	Telephone	202-371-2600
Signature		Date	10/29/03		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Robert Greene Sterne
Edward J. Kessler
Jorge A. Goldstein
David K.S. Cornwell
Robert W. Esmond
Tracy-Gene G. Durkin
Michele A. Cimbala
Michael B. Ray
Robert E. Sokohl
Eric K. Steffe
Michael Q. Lee
Steven R. Ludwig
John M. Covert
Linda E. Alcorn
Robert C. Millonig
Lawrence B. Bugaisky
Donald J. Featherstone
Michael V. Messinger

Judith U. Kim
Timothy J. Shea, Jr.
Patrick E. Garrett
Heidi L. Kraus
Edward W. Yee
Albert L. Ferro*
Donald R. Banowit
Peter A. Jackman
Molly A. McCall
Teresa U. Medler
Jeffrey S. Weaver
Kendrick P. Patterson
Vincent L. Capuano
Eldora Ellison Floyd
Thomas C. Fiala
Brian J. Del Buono
Virgil Lee Beaton
Kimberly N. Reddick

Theodore A. Wood
Elizabeth J. Haanes
Bruce E. Chalker
Joseph S. Ostroff
Frank R. Cottingham
Christine M. Lhulier
Rae Lynn Prengaman
Jane Shershenovich*
Lawrence J. Carroll*
George S. Bardmesser
Daniel A. Klein*
Jason D. Eisenberg
Michael D. Specht
Andrea J. Kamage
Tracy L. Muller
Jon E. Wright*
LuAnne M. Yuricek*
John J. Figueroa

Ann E. Summerfield
Tiera S. Coston*
Anic W. Ledford*
Registered Patent Agents*
Karen R. Markowicz
Nancy J. Leith
Helene C. Carlson
Gaby L. Longworth
Matthew J. Dowd
Aaron L. Schwartz
Mary B. Tung
Katrina Y. Pei Quach
Bryan L. Skelton
Robert A. Schwartzman
Timothy A. Doyle
Jennifer R. Mahalingappa

Teresa A. Colella
Jeffrey S. Lundgren
Victoria S. Rutherford
Eric D. Hayes

Of Counsel
Kenneth C. Bass III
Evan R. Smith

*Admitted only in Maryland
*Admitted only in Virginia
*Practice Limited to
Federal Agencies

October 29, 2003

WRITER'S DIRECT NUMBER:
(202) 772-8677

INTERNET ADDRESS:
RSOKOHL@SKGF.COM

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Mail Stop Patent Application

Re: U.S. Non-Provisional Utility Patent Application under 37 C.F.R. § 1.53(b)
Appl. No. *To Be Assigned*; Filed: Herewith
(based on *Provisional Appl. No. 60/482,494*; Filed: June 26, 2003)
For: **Transceiver For Bidirectional Frequency Division Multiplexed
Transmission**
Inventor(s): Rudi VERBIST
Our Ref: 1875.4600001

Sir:

The following documents are forwarded herewith for appropriate action by the U.S.
Patent and Trademark Office:

1. PTO Fee Transmittal (Form PTO/SB/17);
2. PTO Utility Patent Application Transmittal (Form PTO/SB/05);
3. U.S. Utility Patent Application entitled:

Transceiver For Bidirectional Frequency Division Multiplexed Transmission

and naming as inventor(s):

Rudi VERBIST

the application consisting of:

- a. An Application Data Sheet (37 C.F.R. § 1.76);
- b. A facsimile copy of the original executed Declaration;
- c. A specification containing:
 - i. 12 pages of description prior to the claims;
 - ii. 3 pages of claims (11 claims);
 - iii. a one (1) page abstract;
- d. 2 sheets of drawings: (Figures 1-6);
4. Authorization to Treat a Reply As Incorporating An Extension of Time Under 37 C.F.R. § 1.136(a)(3);
5. Recordation Form Cover Sheet;
6. A facsimile copy of an original executed Assignment to **Broadcom Corporation**, recordation of which is hereby respectfully requested;
7. An Information Disclosure Statement (IDS);
8. Form PTO-1449 (1 page) with TWO (2) accompanying documents; and
9. Two (2) return postcards; and
10. Form PTO-2038 Credit Card Payment Form;

\$ 770.00 Filing fee for patent application;
\$ 40.00 Assignment recordation fee(s).

It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be

Commissioner for Patents
October 29, 2003
Page 3

stamped with the filing date and unofficial application number and returned as soon as possible.
The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or
credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Robert Sokohl
Attorney for Applicant
Registration No. 36,013

RES/mjg
Enclosures

SKGF_DC1:193588.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Rudi VERBIST

Appl. No. To Be Assigned

(based on Provisional Appl. No. 60/482,494; Filed: June 26, 2003)

Filed: Herewith

For: **Transceiver For Bidirectional
Frequency Division Multiplexed
Transmission**

Confirmation No. To Be Assigned

Art Unit: To Be Assigned

Examiner: To Be Assigned

Atty. Docket: 1875.4600001

**Authorization To Treat A Reply As Incorporating An Extension Of
Time Under 37 C.F.R. § 1.136(a)(3)**

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The U.S. Patent and Trademark Office is hereby authorized to treat any concurrent or future reply that requires a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. The U.S. Patent and Trademark Office is hereby authorized to charge all required extension of time fees to our Deposit Account No. 19-0036, if such fees are not otherwise provided for in such reply.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.


Robert Sokohl
Attorney for Applicant
Registration No. 36,013

Date: 10/29/03
1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

SKGF_DC1:193634.1